SR 520 Pontoon Construction
Design-Build Project

Environmental Compliance Plan
Volume II

Appendix H.2
Water Quality Monitoring Plan
for NPDES Sand and Gravel General Permit
During MOTHBALL Phase

Prepared By:

Kiewit-General, A Joint Venture

Prepared For:

Washington State Department of Transportation

September 23, 2015

Revision 7

Released for Construction

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1.0 Introduction

The Water Quality Monitoring Plan (WQMP) provided monitoring guidelines for tracking the performance of the Erosion and Sediment Control Plan (ESCP) used during the Operations Phase of the State Route (SR) 520 Pontoon Construction Design-Build Project (Project), and to ensure that discharged water meets requirements of the NPDES Sand and Gravel General Permit (SGGP). The best management practices (BMPs) used to control sediment and erosion are described in detail in the ESCP and are compliant with the Washington State Department of Transportation's (WSDOT) Highway Runoff Manual (HRM; WSDOT 2008). During the site's Mothball Phase, water quality monitoring is still required as described in the NPDES Sand and Gravel Permit, and this WQMP has been revised to support Kiewit-General's site management efforts until the NPDES SGGP is transferred to WSDOT. This permit transfer occurred on September 2, 2015.

It is important to note that this is not a "stand-alone" plan, and that the site's environmental management personnel must reference several other interrelated environmental plans in order to successfully implement all required compliance efforts. While this plan is provided as an appendix to the site's Environmental Compliance Plan (ECP), it is also identified as one of four distinct plans that comprise the "Site Management Plan", as defined by the SGGP condition S.5. Per this permit condition, the Site Management Plan (SMP) must include the following plans:

- Erosion and Sediment Control Plan
- Water Quality Monitoring Plan
- Stormwater Pollution Prevention Plan
- Spill Control Plan

All of the above listed plans are included as appendices to this site's Environmental Compliance Plan (ECP).

All projects with greater than 1 acre of soil disturbance that may discharge construction storm water to waters of the State are required to obtain a National Pollutant Discharge Elimination System (NPDES) Construction Storm Water General Permit from the Washington State Department of Ecology (Ecology). A Section 402 NPDES Construction Storm Water General Permit (CSGP) was obtained by K-G prior to the start of construction and the monitoring of construction-related storm water discharges - followed the water quality criteria established by that permit (refer to the Construction

Storm Water General Permit Water Quality Monitoring Plan). In addition, K-G obtained a Section 402 NPDES SGGP for concrete production process water during operation of the concrete batch plant and fabrication of the pontoons. This Water Quality Monitoring Plan is applicable only to sampling and monitoring required under the NPDES SGGP and ensures that surface and ground water discharges from the facility's uplands and pontoon construction activities are compliant with the permit requirements. However, because the concrete batch plant was in operation prior to completion of the site development, there was an overlap between the two NPDES permits. As of January 2nd, 2014, having received confirmation from the Department of Ecology, the CSGP was terminated, and this site is now operating entirely under the SGGP.

1.1 Industrial Activities at the Site

Permit condition number S5.B.1(a) of the SGGP requires that this WQMP identify all the industrial activities at the site. The casting basin site has gone through three primary phases of development and operations, during which storm water, process water, and dewatering water will be handled in accordance with applicable regulations. These three phases are as follows:

- **Casting Basin Construction:** During construction of the facility, storm water and dewatering water was managed in accordance with the NPDES CSGP and WSDOT HRM standards. Site construction is now complete, and the CSGP has been terminated.
- **Pontoon Fabrication:** During operation of the casting facility for pontoon fabrication and associated concrete batch plant, process water, storm water, and dewatering water was managed in accordance with the NPDES SGGP and WSDOT HRM standards. A State Waste Discharge Permit was acquired to allow contingency discharge of process water to the City of Aberdeen Wastewater Treatment Plant. However, this permit has been terminated as of July 29, 2015.
- **Site Closure Following Pontoon Fabrication:** Following completion of pontoon fabrication, Kiewit-General began demobilizing from the site. Activities included demolition of temporary structures, removal of equipment and temporary facilities, repairs of permanent infrastructure, cleaning of ponds and drainage systems, removal of temporary BMP devices, hydroseeding, etc. The site transitioned to WSDOT to maintain prior to future use or decommissioning. The NPDES SGGP was transferred to WSDOT September 2, 2015, and its conditions will remain in effect during this Mothball phase.

Industrial activities at the site during the NPDES SGGP duration included concrete batch plant operations (NAICS Code 327320), manufacturing of concrete pontoons (NAICS Codes 327332, 327390, and 327999), heavy equipment fueling and maintenance, and vehicle fueling and maintenance. NAICS Code 212321 (Construction Sand and Gravel Mining) applies for the groundwater dewatering that continuously occurs beneath the casting basin.

1.2 Kiewit-General Environmental Compliance Team

Until the NPDES SGGP Permit is transferred over to WSDOT, the environmental compliance team responsible for water quality monitoring will consist of trained Environmental Personnel (EP) who are Certified Erosion and Sediment Control Leads (CESCL), as required by the Department of Ecology. This team reports to Kiewit-General's Environmental Compliance Manager (ECM), who is also a CESCL. The CESCL team will include one individual who will function as Kiewit-General's Environmental Compliance Lead (ECL). Either the ECL or the ECM will assess BMPs during weekly inspections, as well as within 24-hours after any storm event of greater than 0.5 inches per 24-hour period. The site's Environmental Compliance Plan (ECP) identifies the individuals currently assigned to the above described team positions, as well as the team duties and responsibilities.

2.0 Sampling and Testing Equipment

The following equipment shall be used for water quality sampling. All meters shall be calibrated per manufacturers' guidelines using approved calibration standards. Additional calibrations will be performed immediately if data appears suspect.

Conditions/Procedures	Sampling Equipment
Turbidity	Hach Model 2100 portable turbidimeter or LaMotte Model 2020 turbidimeter, or equivalent. The north pond acid neutralization treatment system includes an inline meter selected through the vendor.
pH and Temperature	Oakton CON10 pH meter,or equivalent. The acid neutralization system at the north pond includes an inline meter selected through the vendor.
Rain Measurement	This Pontoon Construction Project refers to precipitation data available on the internet from NOAA and from Weather Underground (an electronic rain gauge was added to the project site in June 2014; the gauge was removed in July of 2015 upon

	Project Physical Completion
Field Observations	Weekly ESC inspection checklists.
Total Dissolved Solids And Total Suspended Solids	Discharged water is sampled by Kiewit-General and delivered to an Ecology approved laboratory for TDS and TSS analysis. Chain-of-Custody sheets are on file for each sample tested.

3.0 Sampling Information

The following information will be recorded on the Water Quality Summary Report Form (Attachment A) for each sampling event:

- Date, time, and location of the sample.
- Project name and contract number.
- Names of personnel who collected the sample.
- Method of sample collection.
- Amount of rainfall in last 24 hours.
- Field conditions (weather, temperature, pertinent construction activities, any prior disturbance of the water body, etc.).
- Any observation of oil sheen.
- Analytical techniques and testing results for measured parameters.
- Date and time of the last calibration of monitoring equipment.
- Notes summarizing critical activities, unusual conditions, corrective actions, whether or not photographs were taken as supporting documentation, etc.

4.0 NPDES Sand and Gravel General Permit Requirements and Procedures for Discharge during Mothball Phase

4.1 Sample Locations

Until the NPDES SGGP is transferred to WSDOT, water samples will be taken by the Kiewit-General's Environmental Compliance Team members having CESCL certifications, at all points where water is discharged offsite or discharged to the ground or to surface water. Water quality monitoring is required for each outfall (Points of Compliance, POC)

Under the NPDES Sand & Gravel General Permit, the Points of Compliance (POCs) are at all points where water is discharged offsite or to the ground. Site discharge samples will be collected at each outfall before the water enters the receiving body of water. The POC locations are provided in Figure 1.

All water quality forms, maps, and pictures have been kept on file at Kiewit-General's ECM's office along with copies of the K-G's inspection reports. The files were maintained to document BMP inspections, maintenance, discharge, and monitoring activities and will be kept onsite at all times to provide easy access for staff and Ecology during site inspections. NPDES permit violations were immediately reported to the ECM, who notified WSDOT, and reported to Ecology. K-G's ECM will also determined ECAP triggers, and provided follow-up ECAP incident reports to WSDOT. WSDOT also implemented the Environmental Compliance Assurance Procedure (ECAP) as appropriate (Appendix J to the Environmental Compliance Plan).

4.2 Applicable Parameters

Parameter	**Frequency**	**Criteria**
Discharges to Surface Water		
pH	Monthly	6.5–8.5
Turbidity	Twice each month	Monthly average of 50 NTUs, 50 NTUs maximum daily
Total Suspended Solids	Quarterly	40 mg/L
Oil Sheen	Daily when runoff occurs	• Visible sheen • Monthly inspection of oil-water separator required
Discharges to Ground (for NAICS Codes 327320, 327332, 327390, and 327999)		
pH	Monthly	6.5–8.5
Oil Sheen	Daily when runoff occurs	• Visible sheen • Monthly inspection of oil-water separator required
Total Dissolved Solids	Monthly	500 mg/L
NOTE: for Groundwater Dewatering Water discharged to the ground for NAICS activity 212321, only monitoring for oil sheen is required.		

Abbreviation:
NTU Nephelometric Turbidity Unit

The following guidelines will help ensure compliance with the Section 402 NPDES SGGP:

1. **Review Important Project Information and Assess Risk**

   A review of project maps, project definitions, and schedules was performed to better understand when and where construction activities had the greatest potential to impact specific water quality parameters.

2. **Establish Sampling Locations**

   Site discharge samples will be taken at each outfall before the water enters the receiving body of water, when and where it is safe to do so. Alternatively, water may be sampled at the manhole structure connecting to the last uninterrupted discharge pipe to the outfall. In cases where water directly discharges from the site through a traditional storm water treatment BMP (such as a pond or biofiltration swale), sampling will occur at the outlet of the BMP. Samples will be evaluated for turbidity and pH value exceedances. POC locations are provided in **Figure 1** of this plan, which shall be updated as the POC locations change.

3. **Establish Turbidity Sampling Schedule**

   To satisfy NPDES SGGP requirements, samples will be collected at least twice every calendar month. Discharges to surface waters include, but are not limited to, natural offsite surface flow; draining of ponds, vaults, or footings; and flushing of water lines. If the sample or visual observations indicate the potential for a water quality violation, contingency sampling will be performed (described below). Samples will be representative of the flow and characteristics of the discharge. The Water Quality Summary Report Form that will be used when sampling is included in Attachment A.

   As required, samples will be collected within 24 hours of a discharge or rain event. Sampling is not required when there is no discharge during the calendar week. Samples will not be collected outside of normal working hours or during unsafe conditions. If a sample is not collected according to the requirements outlined in the water quality permits and this Monitoring Plan, or if no sample is collected, a note shall be made with a brief description of why a sample was not properly collected or not collected at all. However, this shall only occur in extreme situations, as every attempt shall be made to properly collect a sample when the conditions do not pose a significant hazard to human health.

4. **Establish pH Sampling Schedule**

   Sampling for pH will be under the NPDES SGGP for all Points-of-Compliance (POC) identified as discharging Process Water or Stormwater Type 3.

pH Values

a) The range for pH is 6.5 (minimum) to 8.5 (maximum) standard units. Any time sampling indicates that pH is out of this range:

   i. The high pH water (over 8.5) cannot enter the storm sewer system or waters of the State, and

   ii. If necessary, the high pH is adjusted or neutralized using hydrochloric acid (HCl), sulfuric acid, or "dry ice" (carbon dioxide).

   iii. for low pH water (below 6.5), the addition of soil amending products such as lime may be used to treat the water prior to discharge (see Appendix E for more information)

5. Establish Schedule for Total Suspended Solids Sampling

Sampling for total suspended solids (TSS) is required for concrete process water discharging to surface water. TSS sampling is required quarterly and only for process water under the NPDES SGGP. Type 2 and Type 3 storm water discharges do not require TSS sampling.

TSS sampling requires certified laboratory analysis. Grab samples from the process water discharge are collected in jars and transported to an EPA certified laboratory.

During Mothball Phase, WSDOT site management may elect to coordinate with Ecology to revise the process water outfalls such that they are no longer classified as process water, but rather Stormwater Type 3. This would eliminate the need to test for TSS.

6. Establish Schedule for Oil Sheen Observations

Daily observations for oil sheen are required under the NPDES SGGP. Observations will be conducted as observations of surface water at the site, including the wet ponds, process treatment ponds, and at the ground water discharge sampling location.

The discharge of sheen or petroleum product to surface or groundwater is a violation and must be reported as such. The occurrence of a visible sheen on site is not a violation as long as the site management complies with the following:

a) Implements preventive BMPs and corrects the problem in a timely manner,

b) Reports the occurrence on the inspection report, and

c) Explains the cause and describes the immediate solution and future preventive practices in the inspection report and the SWPPP.

During Mothball Phase, risk of discharge of oil sheens or petroleum products will be minimal, since there are no stored products nor related activities.

7. Contingency Sampling

The WSDOT HRM requires contingency sampling if visual observations suggest that turbidity or pH permit limit values may be exceeded (WSDOT 2008). If monitoring confirms that water quality is out of compliance with permit limit values, the activity causing the problem will immediately be modified or stopped. Hourly monitoring will then be conducted until turbidity and pH water quality standards are met for two consecutive sample periods. High pH water (over 8.5) will not be allowed to discharge from the site. Once compliance is achieved (turbidity less than 50 NTU), WSDOT's ECM will be notified if two or more contingency samples are over 50 NTUs or outside the acceptable pH range (6.5 to 8.5).

Sampling Procedures

The following sampling procedures are required under the NPDES SGGP:

1. Samples will be collected from the discharge points as noted in the Site Operations Monitoring Map (Figure 1 of this plan).
2. All samples that are collected will be representative of the flow and characteristics of the discharge. A sampling bottle will be filled and emptied at least once prior to collecting samples at each location to rinse out previous samples. The sample bottle will be inverted to resuspend particulates prior to turbidity testing.
3. Samples will be visually observed for the presence of suspended sediment, turbidity, discoloration, and oil sheen.
4. All pH testing will occur promptly upon obtaining the water sample, because temperature affects pH.
5. Manufacturers' recommendations for equipment operations will be followed.

4.3 State Waste Discharge Permit

A State Waste Discharge Permit (ST 6223) was obtained to allow process water discharge to the City of Aberdeen WTTP adjacent to the site. However, as of July 29, 2015, this permit has been terminated.

5.0 Office Data Recording and Analysis

To comply with reporting procedures outlined in the NPDES SGGP, Kiewit-General has submitted a Discharge Monitoring Report (DMR) to the Water Quality Permit Coordinator at Ecology's Southwest Regional Office on a quarterly basis by the date indicated in the table below. Kiewit-General submitted to Ecology the DMR for 2015's 2nd Quarter, which ended June 30th. As of September 2, 2015, the NPDES SGGP was transferred to WSDOT; Kieiwt-General will provide WSDOT water quality discharge data obtained for the month of July, and WSDOT will use this information to prepare the DMR for the 3rd Quarter, which ends September 30th. As of July 31, 2015, all data for water quality monitoring shall be compiled by WSDOT. If discharge(s) occurred during normal working hours, and during safe conditions, but no sample was collected during the entire quarter, the Permittee shall submit a DMR form indicating that "no sample was obtained." If no discharge(s) occurred during the entire quarter or the discharges during the quarter occurred outside normal working hours or during unsafe conditions, the Permittee shall submit a DMR indicating "no discharge" or "not operational," as applicable. The DMR will be submitted whether or not there was a discharge. If a Permittee has suspended sampling for a parameter due to consistent attainment, the Permittee shall submit a DMR and indicate that it has achieved Consistent Attainment for that parameter.

The monitoring period began on the date that the NPDES SGGP coverage begans. Kiewit-General has copied WSDOT when reporting NPDES SGGP water quality monitoring data to Ecology. These reports were submitted in hard copy to Ecology via U.S. Postal Service, to the address provided in the DMR form.

As per SGGP Permit condition S6.A.3, the quarterly DMRs are due to Ecology as follows:

Discharge Monitoring Period	**DMR due to Ecology on or before:**
October, November, December	January 30
January, February, March	April 30
April, May, June	July 30

July, August, September	October 30

Copies of the Discharge Monitoring Reports were provided to WSDOT via Centric for WSDOT pursuant to contract requirement RFP 2.8.5.2.

5.1 Waste Discharge Permit Reporting

The State Waste Discharge Permit also required regular reporting in the form of DMRs. The DMR form was submitted monthly, whether discharging or not, and was submitted to Ecology in hard copy via U.S. Postal Service. The DMR is provided in Attachment C. During the Mothball Phase, this DMR will not be required because the permit was terminated as of July 29, 2015.

6.0 Compliance and ECAP Procedures

If a turbidity or pH sample exceeds the limits established in the NPDES SGGP, or if there are other permit violations, the site operator will immediately notify WSDOT management. In accordance with the NPDES SGGP, if the site operator is out of compliance for the NPDES SGGP terms, conditions, or discharge limits, the site operator must stop or correct the unauthorized discharge, notify Ecology's Southwest Regional NPDES SGGP Manager in person or by phone within 24 hours, and submit a detailed report to Ecology outlining the exceedance or non-compliance within 30 days. WSDOT's Contact names and phone numbers are listed in Table 1 on this plan.

7.0 References

Washington State Department of Transportation (WSDOT). 2008. *Highway Runoff Manual*. M 31-16.01. Environmental and Engineering Programs Design Office. Olympia, Washington. June.

LEGEND

- Gate Valve
- Manhole for discharge
- Bioswale
- Conveyance Ditch/Bioswale
- Flow direction

POC - 11: sample water from the manhole

POC - 3: sample water as it spills over the west weir

POC - 10: sample water from the manhole

POC - 2: sample water from the manhole

POC - 4: sample water as it enters the catch basin

Infiltration Trench

P5g to Infiltration Trench: sample water at discharge point into the drainage control structure manhole.

POC - 5 to East Ditch: sample water at discharge point

POC - 6: sample water at the manhole

POC - 7: sample water at the manhole

POC - 8: sample water at the manhole

POC - 1: sample water at the ditch culvert

S002
Outfall to West Dicth

S004
Outfall to East Ditch

S005
Outfall to East Ditch

S006
Outfall to Grays Harbor

S007
Outfall to Grays Harbor

S008
Outfall to Grays Harbor

S001
Outfall to West Dicth

S010

S011

CITY OF ABERDEEN
WASTE WATER
TREATMENT PLANT

PORT OF
GRAYS
HARBOR

POND 1.4
POND 1.3
POND 1.2
POND 1.1
PROCESS
WATER PONDS

WORK AREA FLOWS TO NORTH CONVEYANCE DITCH, TO POND 1

WETLAND

Equipment Wash

Maintenance Shop

North Ramp

EAST SITE ACCESS

PARKING AREAS FLOW TO BIOSWALES

Office Trailers

BIOSWALES DRAIN TO POC-7

Parking

EAST DITCH / WETLAND

BASIN SUMP

CASTING BASIN PROCESS WATER CONVEYED GROUNDWATER DEWATERING AREA CONVEYED TO POND 4

NE Precast Beds process water to Pond 1

NW Precast Beds process water to Pond 1

SE Precast Beds process water to Pond 1

SW Precast Beds process water to Pond 1

CONCRETE BATCH PLANT AREA FLOWS TO WEST CONVEYANCE DITCH, TO POND 1

WEST DITCH / WETLAND

WEST SITE ACCESS

STOCKPILE STORMWATER FLOWS TO CONVEYANCE/BIOSWALE AT BASE OF STOCKPILE

PROCESS WATER POND POND 2

PROCESS WATER POND POND 3

POND 4

GROUNDWATER PRESETTLEMENT POND

WETLAND

GRAYS HARBOR

NORTH

ABERDEEN CASTING BASIN DRY DOCK
SITE MONITORING POINTS-OF-COMPLIANCE

Attachment A

Water Quality Summary Report Form

WEEKLY WATER QUALITY SUMMARY REPORT

Project: SR 520 Pontoons Construction
Contract Number: 323-14285

MONITORING WEEK OF:

TURBIDIMETER
Model:
Serial #:
Calibration Date:

pH Meter
Model:
Serial #:
Calibration Date:

POC #	DATE INSPECTED	TIME	Method of Sampling Collection	NTUs	Permit Limits	pH	Permit Limits	Oil Sheen?		Sampled for TSS?		Sampled for TDS?		Is there any prior disturbance of the receiving body of water?	For receiving waters, describe any visible change in turbidity or color caused by discharge:	24-hr RAINFALL	Weather	Temp. °F	SAMPLED & INSPECTED BY
								YES	NO	YES	NO	YES	NO						
POC-1			Grab Sample		<50 NTU		6.5-8.5			N/A	N/A	N/A	N/A						
POC-2			Grab Sample		<50 NTU		6.5-8.5					N/A	N/A						
POC-3			Grab Sample		<50 NTU		6.5-8.5			N/A	N/A	N/A	N/A						
POC-4			Grab Sample		<50 NTU		6.5-8.5			N/A	N/A	N/A	N/A						
POC-5 To East Ditch			Grab Sample		<50 NTU	N/A	6.5-8.5					N/A	N/A						
POC-5g To Infiltration			Grab Sample	N/A	N/A	N/A	6.5-8.5			N/A	N/A	N/A	N/A						
POC-6 (GH1)			Grab Sample		<50 NTU		6.5-8.5					N/A	N/A						
POC-7 (GH2)			Grab Sample		<50 NTU		6.5-8.5			N/A	N/A	N/A	N/A						
POC-8 (GH3)			Grab Sample		<50 NTU		6.5-8.5					N/A	N/A						
POC-10			Grab Sample		<50 NTU		6.5-8.5					N/A	N/A						
POC-11			Grab Sample		<50 NTU		6.5-8.5					N/A	N/A						

NOTES summarizing critical activities, unusual conditions, corrective actions, any photos taken as supporting documentation, etc:

REVISED 07/01/2015

Permitee Name: Kiewit-General

Permit Number: WAG-50- 501544

Monitoring pt.	NAICS	Type P-S-M	Fate - Sfc./Gr.	Receiving Water	Form	Notes*
POC-1	327390	Stormwater 3	Surface	Grays Harbor		pH, turbidity
POC-2	327390	Process	Surface	Grays Harbor		pH, turbidity,TSS
POC-3	327390	Stormwater 3	Surface	North Wetland		pH, turbidity
POC-4	327390	Stormwater 3	Surface	East Ditch		pH, turbidity
POC-5	212321	Mine Dewatering	Surface	East Ditch		turbidity, TSS
POC-5g	212321	Mine Dewatering	Ground	Ground		Oil Sheen
POC-6	327390	Process	Surface	Grays Harbor		pH, turbidity,TSS
Temp POC-6 **	327390	NOT APPLICABLE	Surface	Grays Harbor		NOT APPLICABLE
POC-7	327390	Stormwater 3	Surface	Grays Harbor		pH, turbidity
POC-8	327390	Process	Surface	Grays Harbor		pH, turbidity,TSS
POC-9	As per Kiewit-General's letter to Ecology dated 7/19/2013, this outfall was never built. DMR Reports do not include this POC.					
POC-10	327390	Process	Surface	Grays Harbor		pH, turbidity,TSS
POC-11	327390	Process	Surface	Grays Harbor		pH, turbidity,TSS

* Visual inspection of Oil sheens will be done for all POC's

** UPDATED 4/21/2014: Temp POC-6 is the outfall from the East Ditch into Grays Harbor. This was a designated point of compliance to monitor process water after treatment through a Chitosan filtration system. Since this system is no longer on site, and since outfalls POC-4 and POC-5 are now being monitored, there is no need to monitor water quality at Temp-POC-6. The East Ditch is Waters of the State which enters Gray's Harbor at the southeast corner of the project site.

REVISED MAY 19, 2014: Sample and test POC-5 for turbidity and Total Suspended Solids (TSS) when discharging to Surface Waters.

REVISED DECEMBER 19, 2014: Sample and test POC-5 for Total Dissolved Solids (TDS) when discharging to the infiltration trench (ground). However, as of 11/26/2014, all "mine dewatering" is being discharged to surface waters only (East Ditch), not to the infiltration trench.

REVISED DECEMBER 31, 2014: Added POC-10 and POC-11. These outfalls need only to be monitored if they discharge into casting basin during float-out events, when the discharge mixes with or has potential to mix with harbor water (Waters of the State).

REVISED JUNE 1, 2015: Per confirmation from Ecology on 5/29/2015, the NACIS Code 212321 applies to the dewatering water being discharged at POC-5. Only Oil sheen monitoring is required when discharging to the infiltration trench ground. The pH is not required to be tested when discharging to surface waters.

Attachment B

Washington State Department of Ecology's Sand and Gravel General Permit Discharge Monitoring Report Form

WAG-50-1544
SAND AND GRAVEL GENERAL PERMIT
DISCHARGE MONITORING REPORT
Stormwater to Surface Water – NAICS Code 212311 (Dimension Stone Mining & Quarrying); 212321 (Construction Sand & Gravel Mining), 212322 (Industrial Sand Mining)

NAME/ FACILITY: SR 520 Pontoon Construction Project
400 E Terminal Way, Aberdeen Grays Harbor

DISCHARGE MONITORING POINT: POC-01
Type 3 Stormwater Discharge to Surface Water

MONITORING PERIOD: FROM: ____/____/____ TO: ____/____/____

(Instructions and Signature Block on Reverse Side)

QUARTERLY MONITORING	☐ There was NO discharge at any time during the quarter **OR**	
	SAMPLE DATE (MM/DD/YYYY)	Nitrate +Nitrite (mg/L as N)
	N/A	N/A
		QUARTERLY AVERAGE = N/A

MONTHLY MONITORING	☐ There was NO discharge at any time during the month **OR**			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
______ MONTH				
			Summary Average=	

	☐ There was NO discharge at any time during the month **OR**			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
______ MONTH				
			Summary Average=	

	☐ There was NO discharge at any time during the month **OR**			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
______ MONTH				
			Summary Average=	

Daily Visible Oil Sheen Detected?	☐ Yes ☒ No	1. If **Yes**, identify all date(s) detected: 2. If **Yes**, identify the probable cause of the oil sheen and the actions taken to prevent further contamination in the inspection report. Failure to describe control of sheen in the inspection report is a permit violation.
Oil Sheen or Petroleum Products Discharged to Surface Water?	☐ Yes ☐ No	If **Yes**, identify all date(s) discharged

	Parameter	Permit Requirement	Units	Frequency
LIMITS	pH	In the Range of 6.5 to 8.5	SU	Monthly
	TSS	Average of 40 or less	mg/L	1/quarter
	Turbidity	50 Average Monthly | 50 Maximum Daily	NTU	2/Month
	Oil Sheen*	No discharge of sheen to surface water	Yes/No	Daily When Runoff Occurs.

Daily monitoring for visible oil sheen is required at all discharge points or representative locations where water collects prior to discharge each day that runoff occurs.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION. I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC § 1001 AND 33 USC § 1319. *(PENALTIES UNDER THESE STATUES MAY INCLUDE FINES UP TO $10,000.00 AND OR MAXIMUM IMPRISONMENT OF BETWEEN SIX MONTHS AND FIVE YEARS.)*

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER (TYPED OR PRINTED) — DATE: MO DAY YEAR

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT — TELEPHONE NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*:

Reporting Permit Violations - When the Permittee cannot comply with the permit limits, due to any cause, the Permittee shall: 1. Immediately take action to stop, contain, and clean up the unauthorized discharges or otherwise stop the violation, correct the problem and, if applicable, repeat the sampling and analysis of any violation; 2. The Permittee is required to notify the Ecology Regional Sand and Gravel Permit Manager orally within 24 hours of when the Permittee becomes aware of the circumstances. Refer to Permit Special Condition **S6. E.** on page **27** for additional requirements.

MAIL THIS FORM TO:

Department of Ecology
Southwest Regional Office
Water Quality Program
P.O. Box 47775
Olympia, WA 98504

WAG-50-1544

SAND AND GRAVEL GENERAL PERMIT

DISCHARGE MONITORING REPORT Form 5

Process Water to Surface Water - NAICS 327320 (Ready-Mixed Concrete), 327331 (Concrete Block), 327332 (Concrete Pipe), 327390 (Concrete Products), 327999 (Misc & Concrete Recycle)

NAME/ FACILITY: SR 520 Pontoon Construction Project
400 E Terminal Way, Aberdeen Grays Harbor

DISCHARGE MONITORING POINT: POC-02
Process Water Discharge to Surface Water

MONITORING PERIOD: FROM: _____/_____/_____ TO: _____/_____/_____

(Instructions and Signature Block on Reverse Side)

QUARTERLY MONITORING	☐ There was NO discharge at any time during the quarter OR	
	SAMPLING DATE (MM/DD/YYYY)	TOTAL SUSPENDED SOLIDS (TSS) in mg/L
		Quarterly Average =

MONTHLY MONITORING	☐ There was NO discharge at any time during the month OR			
______ MONTH	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	

	☐ There was NO discharge at any time during the month OR			
______ MONTH	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	

	☐ There was NO discharge at any time during the month OR			
______ MONTH	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	

Daily Visible Oil Sheen Detected?	☐ Yes ☐ No	1. If **Yes**, identify all date(s) detected: _____ 2. If **Yes**, identify the probable cause of the oil sheen and the actions taken to prevent further contamination in the inspection report. Failure to describe control of sheen in the inspection report is a permit violation.
Oil Sheen or Petroleum Products Discharged to Surface Water?	☐ Yes ☐ No	If **Yes**, identify all date(s) discharged _____

	Parameter	Permit Requirement		Units	Frequency
LIMITS	pH	In the Range of 6.5 to 8.5		SU	Monthly
	TSS	Average of 40 or less		mg/L	1/quarter
	Turbidity	50 Average Monthly	50 Maximum Daily	NTU	2/Month
	Oil Sheen*	No discharge of sheen to surface water		Yes/No	Daily When Runoff Occurs.

Daily monitoring for visible oil sheen is required at all discharge points or representative locations where water collects prior to discharge each day that runoff occurs.

For NAICS 327320, 327331, 327332, 327390, 327399: Quarterly monitoring of Total Suspended Solids (TSS) is required once per quarter. Unless there was no discharge during the entire 3 month period (quarter), there must be at least one sample and analysis for TSS. If more than one sample for TSS is taken in the quarter, calculate the average of the samples and report as the 'Quarterly Average.' The permit requires two results for turbidity each month when discharges occur. Summarize the turbidity results for the month. Calculate the average of the turbidity samples as the sum of all samples over the month divided by the number of samples for the month. Record the average as the 'AVERAGE.'

The permit requires monthly monitoring of pH. Unless there was no discharge during a month, there must be at least one sample and analysis for pH.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION. I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC § 1001 AND 33 USC § 1319. *(PENALTIES UNDER THESE STATUES MAY INCLUDE FINES UP TO $10,000.00 AND OR MAXIMUM IMPRISONMENT OF BETWEEN SIX MONTHS AND FIVE YEARS.)*

_____ _____

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER (TYPED OR PRINTED) DATE: MO DAY YEAR

_____ _____

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT TELEPHONE NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*:

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MAIL THIS FORM TO:
Department of Ecology
Southwest Regional Office
Water Quality Program
P.O. Box 47775
Olympia, WA 98504

WAG-50-1544

SAND AND GRAVEL GENERAL PERMIT

DISCHARGE MONITORING REPORT

Stormwater to Surface Water – NAICS Code 212311 (Dimension Stone Mining & Quarrying), 212321 (Construction Sand & Gravel Mining), 212322 (Industrial Sand Mining)

NAME/ FACILITY: SR 520 Pontoon Construction Project
400 E Terminal Way, Aberdeen Grays Harbor

DISCHARGE MONITORING POINT: POC-03
Type 3 Stormwater Discharge to Surface Water

MONITORING PERIOD: FROM: ____/____/____ TO: ____/____/____

(Instructions and Signature Block on Reverse Side)

QUARTERLY MONITORING	☐ There was NO discharge at any time during the quarter OR	
	SAMPLE DATE (MM/DD/YYYY)	Nitrate +Nitrite (mg/L as N)
	N/A	N/A
		QUARTERLY AVERAGE = N/A

MONTHLY MONITORING	☐ There was NO discharge at any time during the month OR			
____ MONTH	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	
____ MONTH	☐ There was NO discharge at any time during the month OR			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	
____ MONTH	☐ There was NO discharge at any time during the month OR			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	

Daily Visible Oil Sheen Detected?	☐ Yes ☒ No	1. If **Yes**, identify all date(s) detected: 2. If **Yes**, identify the probable cause of the oil sheen and the actions taken to prevent further contamination in the inspection report. Failure to describe control of sheen in the inspection report is a permit violation.
Oil Sheen or Petroleum Products Discharged to Surface Water?	☐ Yes ☐ No	If **Yes**, identify all date(s) discharged

	Parameter	Permit Requirement	Units	Frequency
LIMITS	pH	In the Range of 6.5 to 8.5	SU	Monthly
	TSS	Average of 40 or less	mg/L	1/quarter
	Turbidity	50 Average Monthly | 50 Maximum Daily	NTU	2/Month
	Oil Sheen*	No discharge of sheen to surface water	Yes/No	Daily When Runoff Occurs.

Daily monitoring for visible oil sheen is required at all discharge points or representative locations where water collects prior to discharge each day that runoff occurs.

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NAME/TITLE PRINCIPAL EXECUTIVE OFFICER (TYPED OR PRINTED) — DATE: MO DAY YEAR

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT — TELEPHONE NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*:

Reporting Permit Violations - When the Permittee cannot comply with the permit limits, due to any cause, the Permittee shall: 1. Immediately take action to stop, contain, and clean up the unauthorized discharges or otherwise stop the violation, correct the problem and, if applicable, repeat the sampling and analysis of any violation; 2. The Permittee is required to notify the Ecology Regional Sand and Gravel Permit Manager orally within 24 hours of when the Permittee becomes aware of the circumstances. Refer to Permit Special Condition **S6. E.** on page **27** for additional requirements.

MAIL THIS FORM TO:

Department of Ecology
Southwest Regional Office
Water Quality Program
P.O. Box 47775
Olympia, WA 98504

WAG-50-1544

SAND AND GRAVEL GENERAL PERMIT

DISCHARGE MONITORING REPORT

Stormwater to Surface Water – NAICS Code 212311 (Dimension Stone Mining & Quarrying); 212321 (Construction Sand & Gravel Mining), 212322 (Industrial Sand Mining)

NAME/ FACILITY: SR 520 Pontoon Construction Project
400 E Terminal Way, Aberdeen Grays Harbor

DISCHARGE MONITORING POINT: POC-04
Type 3 Stormwater Discharge to Surface Water

MONITORING PERIOD: FROM: ___/___/___ TO: ___/___/___

(Instructions and Signature Block on Reverse Side)

QUARTERLY MONITORING	☐ There was NO discharge at any time during the quarter **OR**	
	SAMPLE DATE (MM/DD/YYYY)	Nitrate +Nitrite (mg/L as N)
	N/A	N/A
		QUARTERLY AVERAGE = N/A

MONTHLY MONITORING

MONTH	☐ There was NO discharge at any time during the month **OR**			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	

MONTH	☐ There was NO discharge at any time during the month **OR**			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	

MONTH	☐ There was NO discharge at any time during the month **OR**			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	

Daily Visible Oil Sheen Detected?	☐ Yes ☒ No	1. If **Yes**, identify all date(s) detected: 2. If **Yes**, identify the probable cause of the oil sheen and the actions taken to prevent further contamination in the inspection report. Failure to describe control of sheen in the inspection report is a permit violation.
Oil Sheen or Petroleum Products Discharged to Surface Water?	☐ Yes ☐ No	If **Yes**, identify all date(s) discharged

	Parameter	Permit Requirement	Units	Frequency
LIMITS	pH	In the Range of 6.5 to 8.5	SU	Monthly
	TSS	Average of 40 or less	mg/L	1/quarter
	Turbidity	50 Average Monthly | 50 Maximum Daily	NTU	2/Month
	Oil Sheen*	No discharge of sheen to surface water	Yes/No	Daily When Runoff Occurs.

Daily monitoring for visible oil sheen is required at all discharge points or representative locations where water collects prior to discharge each day that runoff occurs.

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NAME/TITLE PRINCIPAL EXECUTIVE OFFICER (TYPED OR PRINTED) — DATE: MO DAY YEAR

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT — TELEPHONE NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*:

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MAIL THIS FORM TO:

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Southwest Regional Office
Water Quality Program
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Olympia, WA 98504

WAG-50-1544

2010 SAND AND GRAVEL GENERAL PERMIT
DISCHARGE MONITORING REPORT Form 9

Process Water to Ground Water – 212321 (Construction Sand and Gravel), 212322 (Industrial Sand)

NAME/ FACILITY: SR 520 Pontoon Construction Project
400 E Terminal Way, Aberdeen Grays Harbor

DISCHARGE MONITORING POINT: POC-5g
Dewatering Water discharge to the Ground

MONITORING PERIOD: FROM: ____/____/____ TO: ____/____/____

(Instructions and Signature Block on Reverse Side)

DAILY MONITORING WHEN RUNOFF OCCURS

Visible Oil Sheen Detected?	☐ Yes ☐ No	1. If Yes, identify all date(s) detected: _____ 2. If Yes, identify the probable cause of the oil sheen and the actions taken to prevent further contamination in the inspection report. Failure to describe control of sheen in the inspection report is a permit violation.

LIMITS	Parameter	Minimum	Maximum	Units	# Samples
	Oil Sheen	**No discharge of sheen to ground water or surface water**		**Yes/No**	**Observe daily when runoff occurs**

Oil Sheen or Petroleum Products Discharged to Ground Water or Surface Water?	☐ Yes ☐ No	If Yes, date(s) discharged_____

Daily monitoring for visible oil sheen is required at all discharge points or representative locations where water collects prior to discharge each day that runoff occurs.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION. I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC § 1001 AND 33 USC § 1319. (PENALTIES UNDER THESE STATUES MAY INCLUDE FINES UP TO $10,000.00 AND OR MAXIMUM IMPRISONMENT OF BETWEEN SIX MONTHS AND FIVE YEARS.)

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER (TYPED OR PRINTED)

DATE: YEAR MO DAY

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*:

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MAIL THIS FORM TO:

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Southwest Regional Office
Water Quality Program
P.O. Box 47775
Olympia, WA 98504

WAG-50-1544
SAND AND GRAVEL GENERAL PERMIT
DISCHARGE MONITORING REPORT

NAICS CODE 212321

NAME/ FACILITY: SR 520 Pontoon Construction Project
400 E Terminal Way, Aberdeen Grays Harbor

DISCHARGE MONITORING POINT: POC-5
Dewatering Water Discharge to Surface Water

MONITORING PERIOD: FROM: ______/______/______ TO: ______/______/______

(Instructions and Signature Block on Reverse Side)

QUARTERLY MONITORING

☐ There was NO discharge at any time during the quarter **OR**

SAMPLING DATE (MM/DD/YYYY)	TOTAL SUSPENDED SOLIDS (TSS) in mg/L
	Quarterly Average =

MONTHLY MONITORING

__________ MONTH

☐ There was NO discharge at any time during the month **OR**

SAMPLING DATE (MM/DD/YYYY)	TURBIDITY (NTUs)		☐ Check if only ONE discharge during the month
		Summary Average=	

__________ MONTH

☐ There was NO discharge at any time during the month **OR**

SAMPLING DATE (MM/DD/YYYY)	TURBIDITY (NTUs)		☐ Check if only ONE discharge during the month
		Summary Average=	

__________ MONTH

☐ There was NO discharge at any time during the month **OR**

SAMPLING DATE (MM/DD/YYYY)	TURBIDITY (NTUs)		☐ Check if only ONE discharge during the month
		Summary Average=	

Daily Visible Oil Sheen Detected?	☐ Yes ☐ No	1. If **Yes**, identify all date(s) detected: _____ 2. If **Yes**, identify the probable cause of the oil sheen and the actions taken to prevent further contamination in the inspection report. Failure to describe control of sheen in the inspection report is a permit violation.
Oil Sheen or Petroleum Products Discharged to Surface Water?	☐ Yes ☐ No	If **Yes**, identify all date(s) discharged _____

	Parameter	Permit Requirement	Units	Frequency
LIMITS	~~pH~~	~~In the Range of 6.5 to 8.5~~	~~SU~~	~~Monthly~~
	TSS	Average of 40 or less	mg/L	1/quarter
	Turbidity	50 Average Monthly | 50 Maximum Daily	NTU	2/Month
	Oil Sheen*	No discharge of sheen to surface water	Yes/No	Daily When Runoff Occurs.

Daily monitoring for visible oil sheen is required at all discharge points or representative locations where water collects prior to discharge each day that runoff occurs.

For NAICS 327320, 327331, 327332, 327390, 327399: Quarterly monitoring of Total Suspended Solids (TSS) is required once per quarter. Unless there was no discharge during the entire 3 month period (quarter), there must be at least one sample and analysis for TSS. If more than one sample for TSS is taken in the quarter, calculate the average of the samples and report as the 'Quarterly Average.' The permit requires two results for turbidity each month when discharges occur. Summarize the turbidity results for the month. Calculate the average of the turbidity samples as the sum of all samples over the month divided by the number of samples for the month. Record the average as the 'AVERAGE.'

~~The permit requires monthly monitoring of pH. Unless there was no discharge during a month, there must be at least one sample and analysis for pH.~~

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_____ _____

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER (TYPED OR PRINTED) DATE: MO DAY YEAR

_____ _____

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT TELEPHONE NUMBER

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MAIL THIS FORM TO:
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Water Quality Program
P.O. Box 47775
Olympia, WA 98504

WAG-50-1544

SAND AND GRAVEL GENERAL PERMIT

DISCHARGE MONITORING REPORT Form 5

Process Water to Surface Water - NAICS 327320 (Ready-Mixed Concrete), 327331 (Concrete Block), 327332 (Concrete Pipe), 327390 (Concrete Products), 327999 (Misc & Concrete Recycle)

NAME/ FACILITY: SR 520 Pontoon Construction Project
400 E Terminal Way, Aberdeen Grays Harbor

DISCHARGE MONITORING POINT: POC-06
Process Water Discharge to Surface Water

MONITORING PERIOD: FROM: _____/_____/_____ TO: _____/_____/_____

(Instructions and Signature Block on Reverse Side)

QUARTERLY MONITORING	☐ There was NO discharge at any time during the quarter **OR**	
	SAMPLING DATE (MM/DD/YYYY)	TOTAL SUSPENDED SOLIDS (TSS) in mg/L
		Quarterly Average =

MONTHLY MONITORING	☐ There was NO discharge at any time during the month **OR**			
_____ MONTH	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	

	☐ There was NO discharge at any time during the month **OR**			
_____ MONTH	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	

	☐ There was NO discharge at any time during the month **OR**			
_____ MONTH	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	

Daily Visible Oil Sheen Detected?	☐ Yes ☐ No	1. If **Yes**, identify all date(s) detected: 2. If **Yes**, identify the probable cause of the oil sheen and the actions taken to prevent further contamination in the inspection report. Failure to describe control of sheen in the inspection report is a permit violation.
Oil Sheen or Petroleum Products Discharged to Surface Water?	☐ Yes ☐ No	If **Yes**, identify all date(s) discharged

	Parameter	Permit Requirement	Units	Frequency
LIMITS	pH	In the Range of 6.5 to 8.5	SU	Monthly
	TSS	Average of 40 or less	mg/L	1/quarter
	Turbidity	50 Average Monthly | 50 Maximum Daily	NTU	2/Month
	Oil Sheen*	No discharge of sheen to surface water	Yes/No	Daily When Runoff Occurs.

Daily monitoring for visible oil sheen is required at all discharge points or representative locations where water collects prior to discharge each day that runoff occurs.

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NAME/TITLE PRINCIPAL EXECUTIVE OFFICER (TYPED OR PRINTED) — DATE: MO DAY YEAR

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT — TELEPHONE NUMBER

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*:

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MAIL THIS FORM TO:
Department of Ecology
Southwest Regional Office
Water Quality Program
P.O. Box 47775
Olympia, WA 98504

WAG-50-1544

SAND AND GRAVEL GENERAL PERMIT

DISCHARGE MONITORING REPORT

Stormwater to Surface Water – NAICS Code 212311 (Dimension Stone Mining & Quarrying); 212321 (Construction Sand & Gravel Mining), 212322 (Industrial Sand Mining)

NAME/ FACILITY: SR 520 Pontoon Construction Project
400 E Terminal Way, Aberdeen Grays Harbor

DISCHARGE MONITORING POINT: POC-07
Type 3 Stormwater Discharge to Surface Water

MONITORING PERIOD: FROM: ____/____/____ TO: ____/____/____

(Instructions and Signature Block on Reverse Side)

QUARTERLY MONITORING	☐ There was NO discharge at any time during the quarter OR	
	SAMPLE DATE (MM/DD/YYYY)	Nitrate +Nitrite (mg/L as N)
	N/A	N/A
		QUARTERLY AVERAGE = N/A

MONTHLY MONITORING	☐ There was NO discharge at any time during the month OR			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
______ MONTH				
			Summary Average=	

	☐ There was NO discharge at any time during the month OR			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
______ MONTH				
			Summary Average=	

	☐ There was NO discharge at any time during the month OR			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
______ MONTH				
			Summary Average=	

Daily Visible Oil Sheen Detected?	☐ Yes ☒ No	1. If **Yes**, identify all date(s) detected: 2. If **Yes**, identify the probable cause of the oil sheen and the actions taken to prevent further contamination in the inspection report. Failure to describe control of sheen in the inspection report is a permit violation.
Oil Sheen or Petroleum Products Discharged to Surface Water?	☐ Yes ☐ No	If **Yes**, identify all date(s) discharged

	Parameter	Permit Requirement	Units	Frequency
LIMITS	pH	In the Range of 6.5 to 8.5	SU	Monthly
	TSS	Average of 40 or less	mg/L	1/quarter
	Turbidity	50 Average Monthly | 50 Maximum Daily	NTU	2/Month
	Oil Sheen*	No discharge of sheen to surface water	Yes/No	Daily When Runoff Occurs.

Daily monitoring for visible oil sheen is required at all discharge points or representative locations where water collects prior to discharge each day that runoff occurs.

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NAME/TITLE PRINCIPAL EXECUTIVE OFFICER (TYPED OR PRINTED) — DATE: MO DAY YEAR

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT — TELEPHONE NUMBER

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MAIL THIS FORM TO:

Department of Ecology
Southwest Regional Office
Water Quality Program
P.O. Box 47775
Olympia, WA 98504

WAG-50-1544

SAND AND GRAVEL GENERAL PERMIT

DISCHARGE MONITORING REPORT Form 5

Process Water to Surface Water - NAICS 327320 (Ready-Mixed Concrete), 327331 (Concrete Block), 327332 (Concrete Pipe), 327390 (Concrete Products), 327999 (Misc & Concrete Recycle)

NAME/ FACILITY: SR 520 Pontoon Construction Project
400 E Terminal Way, Aberdeen Grays Harbor

DISCHARGE MONITORING POINT: POC-08
Process Water Discharge to Surface Water

MONITORING PERIOD: FROM: ______/______/______ TO: ______/______/______

(Instructions and Signature Block on Reverse Side)

QUARTERLY MONITORING	☐ There was NO discharge at any time during the quarter **OR**	
	SAMPLING DATE (MM/DD/YYYY)	TOTAL SUSPENDED SOLIDS (TSS) in mg/L
		Quarterly Average =

MONTHLY MONITORING	☐ There was NO discharge at any time during the month **OR**			
______ MONTH	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	

	☐ There was NO discharge at any time during the month **OR**			
______ MONTH	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	

	☐ There was NO discharge at any time during the month **OR**			
______ MONTH	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
			Summary Average=	

Daily Visible Oil Sheen Detected?	☐ Yes ☐ No	1. If **Yes**, identify all date(s) detected: _____ 2. If **Yes**, identify the probable cause of the oil sheen and the actions taken to prevent further contamination in the inspection report. Failure to describe control of sheen in the inspection report is a permit violation.
Oil Sheen or Petroleum Products Discharged to Surface Water?	☐ Yes ☐ No	If **Yes**, identify all date(s) discharged _____

	Parameter	Permit Requirement		Units	Frequency
LIMITS	pH	In the Range of 6.5 to 8.5		SU	Monthly
	TSS	Average of 40 or less		mg/L	1/quarter
	Turbidity	50 Average Monthly	50 Maximum Daily	NTU	2/Month
	Oil Sheen*	No discharge of sheen to surface water		Yes/No	Daily When Runoff Occurs.

Daily monitoring for visible oil sheen is required at all discharge points or representative locations where water collects prior to discharge each day that runoff occurs.

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The permit requires monthly monitoring of pH. Unless there was no discharge during a month, there must be at least one sample and analysis for pH.

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Southwest Regional Office
Water Quality Program
P.O. Box 47775
Olympia, WA 98504

WAG-50-1544

SAND AND GRAVEL GENERAL PERMIT

DISCHARGE MONITORING REPORT Form 5

Process Water to Surface Water - NAICS 327320 (Ready-Mixed Concrete), 327331 (Concrete Block), 327332 (Concrete Pipe), 327390 (Concrete Products), 327999 (Misc & Concrete Recycle)

NAME/ FACILITY: SR 520 Pontoon Construction Project
400 E Terminal Way, Aberdeen Grays Harbor

DISCHARGE MONITORING POINT: POC-10
Process Water Discharge to Surface Water

MONITORING PERIOD: FROM: ______/______/______ TO: ______/______/______

(Instructions and Signature Block on Reverse Side)

QUARTERLY MONITORING	☐ There was NO discharge at any time during the quarter **OR**	
	SAMPLING DATE (MM/DD/YYYY)	TOTAL SUSPENDED SOLIDS (TSS) in mg/L
		Quarterly Average =

MONTHLY MONITORING	☐ There was NO discharge at any time during the month **OR**			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
______ MONTH				
			Summary Average=	
	☐ There was NO discharge at any time during the month **OR**			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
______ MONTH				
			Summary Average=	
	☐ There was NO discharge at any time during the month **OR**			
	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
______ MONTH				
			Summary Average=	

Daily Visible Oil Sheen Detected?	☐ Yes ☐ No	1. If **Yes**, identify all date(s) detected: _____ 2. If **Yes**, identify the probable cause of the oil sheen and the actions taken to prevent further contamination in the inspection report. Failure to describe control of sheen in the inspection report is a permit violation.
Oil Sheen or Petroleum Products Discharged to Surface Water?	☐ Yes ☐ No	If **Yes**, identify all date(s) discharged _____

	Parameter	Permit Requirement		Units	Frequency
LIMITS	pH	In the Range of 6.5 to 8.5		SU	Monthly
	TSS	Average of 40 or less		mg/L	1/quarter
	Turbidity	50 Average Monthly	50 Maximum Daily	NTU	2/Month
	Oil Sheen*	No discharge of sheen to surface water		Yes/No	Daily When Runoff Occurs.

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Water Quality Program
P.O. Box 47775
Olympia, WA 98504

WAG-50-1544
SAND AND GRAVEL GENERAL PERMIT
DISCHARGE MONITORING REPORT Form 5

Process Water to Surface Water - NAICS 327320 (Ready-Mixed Concrete), 327331 (Concrete Block), 327332 (Concrete Pipe), 327390 (Concrete Products), 327999 (Misc & Concrete Recycle)

NAME/ FACILITY: SR 520 Pontoon Construction Project
400 E Terminal Way, Aberdeen Grays Harbor

DISCHARGE MONITORING POINT: POC-11
Process Water Discharge to Surface Water

MONITORING PERIOD: FROM: ____/____/____ TO: ____/____/____

(Instructions and Signature Block on Reverse Side)

QUARTERLY MONITORING	☐ There was NO discharge at any time during the quarter **OR**	
	SAMPLING DATE (MM/DD/YYYY)	TOTAL SUSPENDED SOLIDS (TSS) in mg/L
		Quarterly Average =

MONTHLY MONITORING	☐ There was NO discharge at any time during the month **OR**			
______ MONTH	SAMPLING DATE (MM/DD/YYYY)	pH standard units (Do not average pH)	TURBIDITY (NTUs)	☐ Check if only ONE discharge during the month
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Olympia, WA 98504

Attachment C

Washington State Department of Ecology's State Waste Discharge Permit Discharge Monitoring Report Form

ATTACHMENT DELETED:
STATE WASTE DISCHARGE
PERMIT WAS TERMINATED
ON JULY 29, 2015

Attachment D

Site Weather Data Station

ATTACHMENT DELETED: WEATHER STATION WAS REMOVED FROM SITE IN JULY 2015

Attachment E

Treatment of Low pH Stormwater

Attachment E

Treatment of Low pH Stormwater

SR 520 Pontoons Construction Site's
Treatment of Low pH Water

Background:

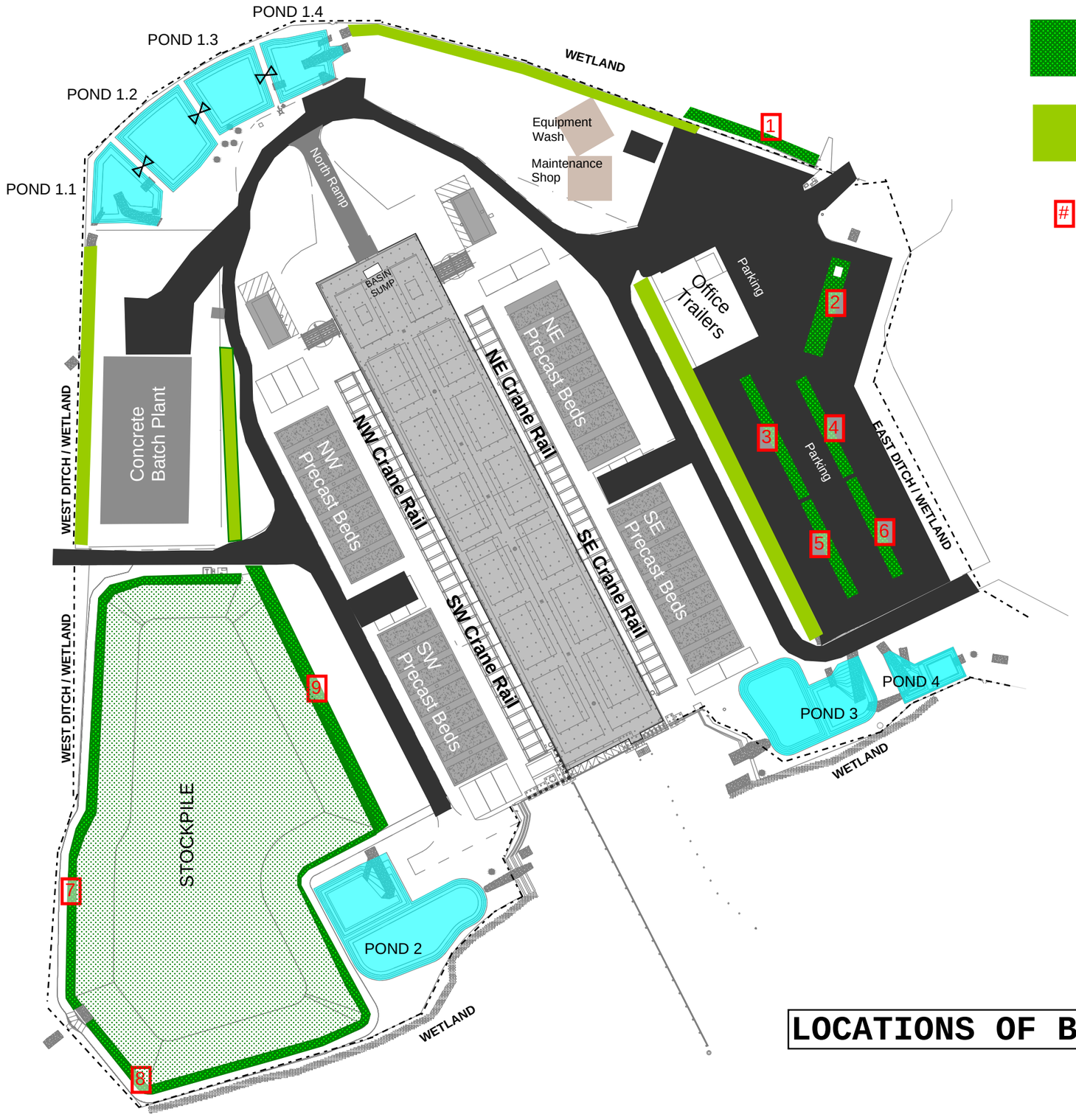
Over the wet season of 2014-2015, Kiewit-General noted that the pH for stormwater sampled at discharge points (POC's) around the site had been generally decreasing. During a storm event that occurred April 13, 2015, rainwater was collected and tested at 5.8 pH. Kiewit-General contacted Ecology to inform the Sand and Gravel Permit Manager, Chris Johnson, of this condition. Mr. Johnson confirmed that resource agencies have noted that the rain pH in the Northwest areas has been dropping, and is currently averaging between 5.5 and 6.0 pH. However, the NPDES Sand and Gravel General permit does not allow discharge of impounded stormwater to be under 6.5 pH. He agreed that treatment of the stormwater would be required in order to comply with the permit water quality effluent limits.

Treatment:

Kiewit-General's environmental consultant Floyd|Snider recommended that the soil in the bioswales can be amended with Lime to increase the soil pH, which will effectively treat stormwater as it passes over it towards the discharge drain. To monitor progress and effectiveness of the pH treatment, the following procedures may be implemented:

1) Test the soil pH before treatment. Soil pH may be tested on site using a store-bought soil pH meter, or other commonly used testing method.
2) Apply the lime product to the soil areas as per manufacturer's directions. Make a record of where the soil was treated, date of treatment, and quantity of lime product used.
3) Test the soil pH after treatment is expected to take effect, per manufacturer's suggestion.

Bioswale #	Bioswale Area (SF)	Pre-Treated Soil pH	Date Soil pH Tested	Date Lime applied	Total Qty applied	Post-treated Soil pH	Date Soil pH Tested
1	3,800 SF	4 to 5	5/20/2015	6/9/2015	200 LBS		
2	5,300 SF	5	4/21/2015	6/2/2015	300 LBS	6	6/3/2015
3	4,400 SF	4.5 to 5.5	5/20/2015	6/23/2015	150 LBS		
4	3,800 SF	5 to 6	5/20/2015	6/23/2015	150 LBS		
5	3,700 SF	6 to 7	5/20/2015	6/23/2015	100 LBS		
6	3,600 SF	6.5 to 7	5/20/2015	6/23/2015	100 LBS		



WET BIOSWALE

CONVEYANCE DITCH

BIOSWALE DESIGNATED ID

Square Foot Area of Bioswales
#1 = 3,800 SF
#2 = 5,300 SF
#3 = 4,400 SF
#4 = 3,800 SF
#5 = 3,700 SF
#6 = 3,600 SF
#7 = 12,000 SF
#8 = 12,700 SF
#9 = 6,400 SF

LOCATIONS OF BIOSWALES

Easy to use!

Helps alleviate over and under watering

Basic soil pH information included

¡Fáciles de usar!

Ayuda a compensar el riego excesivo o insuficiente

Incluye información básica acerca del pH

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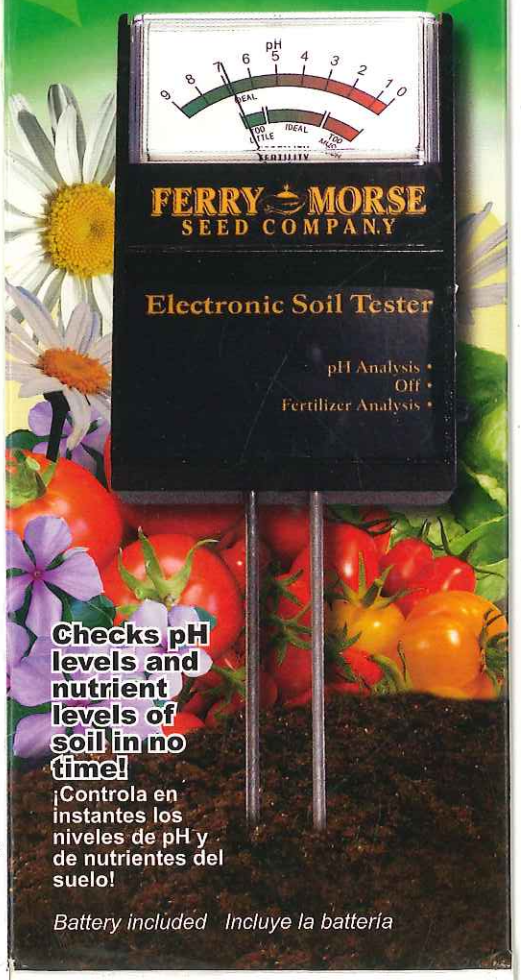
Electronic Soil Tester

Probador electrónico para suelos



Checks pH levels and nutrient levels of soil in no time!

¡Controla en instantes los niveles de pH y de nutrientes del suelo!

Battery included *Incluye la batería*

Electronic Soil Tester

Probador electrónice para suelos

A Healthy, Successful Garden Begins with Good Soil

Un jardín saludable y logrado comienza con un buen suelo

This dual purpose electronic meter tests soil pH and nutrient levels. Soil pH controls how well plants utilize the nutrients available in your soil. All plants have a particular pH preference, so it is important to know the pH level of your soil. You can then choose plants with the same pH preferences, avoid those that will not do well in your soil, or work to adjust your soil pH level.

Este medidor electrónico de doble función prueba los niveles de pH y de nutrientes del suelo. El pH del suelo controla cuán bien utilizan las plantas los nutrientes disponibles en el suelo. Cada planta tiene una preferencia particular de pH, por eso es importante que usted conozca el nivel del pH de su suelo. Una vez que conozca esto podra el ir las plantas con la misma preferencia de pH. Y evitara las que no se adapten a su suelo, o trabajara para ajustar el nivel del pH del suelo.

- Determines soil pH within the range of 1 (acid) to 9 (alkaline)
  Determina el nivel del pH dentro de la escala que va desde 1 (ácido) hasta 9 (alcalino)
- Includes pH preferences for over 400 garden and landscape plants
  Incluye las preferencias de pH de más de 400 plantas de jardin y paisajes
- Measures soil's N-P-K content in combination
  Mide el contenido de N, P y K a la vez

#0978A

Determine your soil pH and nutrient levels in these easy steps:

1. Collect a soil sample from the area to be tested and thoroughly moisten.
2. Slide selector switch to the desired position - "pH Analysis" or "Fertilizer Analysis".
3. Insert probes completely into the soil sample.
4. Within seconds, the meter will indicate the pH or fertility condition of your soil. Check the detailed pH preference list in the enclosed booklet, then select the plants suitable for your soil or follow the instructions for correcting your soil condition.

Determine los niveles de pH y de nutrientes del suelo siguiendo estos sencillos pasos:

1. Tome una muestra de suelo del área que analizará y mójela con abundante agua.
2. Deslice el interruptor del selector hasta la posición deseada ("análisis de pH" o "análisis de fertilización")
3. Entierre por completo las sondas en la muestra de tierra.
4. En segundos, el medidor indicará el pH o las condiciones de fertilidad de su suelo. Revise la lista detallada de preferencias de pH en el folleto adjunto; luego, elija las plantas adecuadas para su suelo y siga las instrucciones para corregir las condiciones de éste.

BENEFITS OF LIMING

- Reduces acidity, increases pH.
- Binds the fine particles of clay into larger particles and so helps aerate and drain the soil.
- Helps to retain moisture and plant foods in sandy soils.
- Balances the addition of acidic fertilizers; nitrochalk is an example.
- The lime content of soil will sometimes affect flower and foliage color. Blue and red hydrangea flowers are the most common examples.
- Supplies the plant food calcium.
- Makes nitrogen available by stimulating the micro-organisms that help decompose organic matter.
- Increases the earthworm population.
- Protects against a few diseases, such as club root in brassicas (but causes scab in potatoes) and is disliked by organisms that help decompose organic matter.

ADDING CHEMICALS AND ORGANICS TO REDUCE pH

The best way to reduce pH is to use the compost heap and farmyard manure to regularly introduce decaying humus. This not only reduces pH gradually but helps hold plant foods and moisture. Peat – relatively inert and usually only about 4% nitrogen content – is another useful soil conditioner of an acid nature.

Sulfate of ammonia and flowers of sulfur are chemical treatments and sulfate of ammonia also adds nitrogen.

While the tiny bacteria and micro-organisms work unseen in the soil, breaking down fresh organic matter into plant food, they produce acids. But if this process eventually creates too low a pH the organisms will work less efficiently – and lime is then needed as a balance and stimulant.

It is sensible to progress gradually towards a reduced pH and certainly not to expect to be able to be precise in exactly how much of a material will reduce pH by a given amount.

Remember to avoid adding animal manures or sulfate of ammonia at the same time as lime or basic slag (a phosphate food).

TO RAISE OR LOWER pH OF YOUR SOIL

Raising and lowering pH is not an exact science and most plants have a reasonably wide tolerance, certainly to within 1 pH point. Consult the long list of plant pH preferences in this booklet and you will see that the majority can manage well on a pH around 6.5 but some need an alkaline soil and some a particularly acid soil.

Altering pH takes time so do not expect rapid changes; rather, work steadily towards giving a plant its ideal conditions.

ADDING LIME TO INCREASE pH

Lime can be added at any time of year but it does need time to take effect – which is why the autumn, winter and early spring are the preferred times.

The two main types of lime are ground limestone and hydrated lime. Ground limestone is slower acting but more pleasant to handle. Hydrated lime may take effect in two or three months but ground chalk or limestone may take up to six months.

The amount of lime needed to raise a spade's depth of top soil by 1pH varies from 5 1/2 oz. of hydrated lime or 7 1/2 oz ground limestone on sandy soil to 11 oz. of hydrated lime or 15 oz. ground limestone on heavy clays or peaty soils per square yard. So do not expect pH correction to be too precise!

Avoid adding lime at the same time as sulfate of ammonia, superphosphate, basic slag or animal manures. Lime may be used in combination with sulfate of potash or muriate of potash.

It is because of the natural drop in pH that there is such an emphasis on adding lime. While lime stimulates the availability of most plant foods, you will see from the "pH and Plant Nutrient" table that soils should not automatically be limed because large amounts of plant food become increasingly "locked up" over pH7.

BEFORE TESTING THE SOIL

If you are preparing to plant a bed of plants, or to plant a crop of fruit, vegetables or shrubs, or to put out grass seed, you will find it beneficial to sample and test the soil in a number of locations in the area to confirm that the soil's pH is generally consistent over the entire area and that it is within the plant's pH range.

HOW TO USE YOUR METER TO MEASURE pH

1.) Remove the top 2" of the surface soil. Break up and crumble the soil underneath to a depth of 5". Remove any stones or organic debris such as leaves and twigs because they can affect the final result.

2.) Thoroughly wet the soil with water (ideally rain or distilled water) to a mud consistency.

3.) Slide the switch all the way up.

4.) Wet probes. Clean thoroughly with special cleaning pad provided.

5.) Insert probes into soil up to plastic base.

6.) Wait one minute and take reading.

7.) Wipe the probes clean and dry.

8.) If you are going to make another test, begin at #1.

HOW TO USE YOUR SOIL TESTER TO MEASURE FERTILITY

1.) Remove the top 2" of the surface soil. Break up and crumble the soil underneath to a depth of 5". Remove any stones or organic debris such as leaves and twigs because they can affect the final result.

2.) Thoroughly wet the soil with water (ideally rain or distilled water) to a mud consistency.

3.) Move the switch on the left side of the Soil Tester from its mid-position all the way down until it stops.

4.) Clean probes thoroughly with the pad provided.

5.) Insert the probes fully up to the base of the instrument.

6.) Where the needle points after 5 seconds is the reading.

7.) Slide the switch up to the mid (off) position.

8.) Clean and dry probes.

9.) Store away.

10.) If you want to take more measurements begin at #1.

ADVICE ON PREPARATION OF SOIL SAMPLE

In order to obtain an even more accurate result with your unit, the following procedure may be adopted.

Take the sample of soil to be tested from the ground and remove stones and organic debris. Prepare the sample by crumbling the soil into small particles. Measure two cups of soil from the prepared sample. Fill a clean glass or plastic container with two cups of distilled or de-ionised water and add the measured soil sample. Ensure the soil and water are thoroughly mixed and compact the sample firmly. Drain off any excess water. *Proceed to step 3 of "How to Use Your Meter to Measure pH"

TESTING FOR PLANTS POTTED IN SOIL OR POTTING SOIL

Only test at the beginning of, or during, the growing season, never in the dormant period. Do not test the soil for a plant that has been recently repotted as the plant will be in a delicate state and not yet reestablished.

For established plants a pH reading should be taken just after watering. First, water each plant (without adding plant food). Rainwater should always be used for houseplants as calcium present in domestic water systems can adversely affect acid loving plants – see pH preference list. Leave the pot to drain to ensure the soil is thoroughly moistened.

*Proceed to step 3 of "How to Use Your Meter to Measure pH"

If you are testing the soil in a planter and the reading is not reflecting the plant's desired pH range, you should repot the plant. Do not try to add a balancing agent to the top of the soil in an attempt to alter the soil's pH. Note: If you have a healthy, thriving plant (despite a reading that does not conform to the pH preference chart) do not disturb the plant as it may have acclimatized itself.

Plant pH Preference List

NOMBRE	pH
FRUTALES	
APPLE	5.0 - 6.5
APRICOT	6.0 - 7.0
AVOCADO	6.0 - 7.5
BANANA	5.0 - 7.0
BLACKBERRY	5.0 - 6.0
BLUEBERRY	4.0 - 6.0
CANTALOUPE	6.5 - 7.5
CHERRY	6.0 - 7.5
CRANBERRY	5.5 - 6.5
CURRENT: Black	6.0 - 8.0
Red	5.5 - 7.0
White	6.0 - 8.0
DAMSON	6.0 - 7.5
GOOSEBERRY	5.0 - 6.5
GRAPEVINE	6.0 - 7.0
GRAPEFRUIT	6.0 - 7.5
HAZELNUT	6.0 - 7.0
HOP	6.0 - 7.5
HUCKLEBERRY	4.0 - 6.0
LEMON	6.0 - 7.0
LYCHEE	6.0 - 7.0
MANGO	5.0 - 6.0
MELON	5.5 - 6.5
MULBERRY	6.0 - 7.5
NECTARINE	6.0 - 7.5
PEACH	6.0 - 7.5
PEAR	6.0 - 7.5
PINEAPPLE	5.0 - 6.0
PLUM	6.0 - 7.5
POMEGRANATE	5.5 - 6.5
QUINCE	6.0 - 7.5
RASPBERRY	5.0 - 7.5
RHUBARB	5.5 - 7.0
STRAWBERRY	5.0 - 7.5
WATERMELON	5.5 - 6.5
VEGETALES Y HIERBAS	
ARTICHOKE	6.5 - 7.5
ASPARAGUS	6.0 - 8.0
BASIL	5.5 - 6.5
BEAN	6.0 - 7.5
(Runner, Broad, French)	
BEETROOT	6.0 - 7.5
BROCCOLI	6.0 - 7.0
BRUSSELS SPROUTS	6.0 - 7.5
CABBAGE	6.0 - 7.5
CALABRESE	6.5 - 7.5
CARROT	5.5 - 7.0
CAULIFLOWER	5.5 - 7.5
CELERY	6.0 - 7.0
CHICORY	5. 0 - 6.5
CHINESE CABBAGE	6.0 - 7.5
CHIVES	6.0 - 7.0
CORN - SWEET	5.5 - 7.0
CRESS	6.0 - 7.0
COURGETTES	5.5 - 7.0
CUCUMBER	5.5 - 7.5
FENNEL	5.0 - 6.0
GARLIC	5.5 - 7.5
GINGER	6.0 - 8.0
HORSERADISH	6.0 - 7.0
KALE	6.0 - 7.5
KOHLRABI	6.0 - 7.5
LEEK	6.0 - 8.0
LENTIL	5.5 - 7.0
LETTUCE	6.0 - 7.0
MARJORAM	6.0 - 8.0
MARROW	6.0 - 7.5
MILLET	6.0 - 6.5
MINT	7.0 - 8.0
MUSHROOM	6.5 - 7.5
MUSTARD	6.0 - 7.5
OLIVE	5.5 - 6.5
ONION	6.0 - 7.0
PAPRIKA	7.0 - 8.5
PARSLEY	5.0 - 7.0
PARSNIP	5.5 - 7.5
PEA	6.0 - 7.5
PEANUT	5.0 - 6.5
PECAN	4.0 - 6.0
PEPPER	5.5 - 7.0
PEPPERMINT	6.0 - 7.5
PISTACHIO	5.0 - 6.0
POTATO	4.5 - 6.0
POTATO - SWEET	5.5 - 6.0
PUMPKIN	5.5 - 7.5
RADISH	6.0 - 7.0
RICE	5.0 - 6.5
ROSEMARY	5.0 - 6.0

NOMBRE	pH
VEGETALES Y HIERBAS	
SAGE	5.5 - 6.5
SHALLOT	5.5 - 7.0
SORGHUM	5.5 - 7.5
SOYBEAN	5.5 - 6.5
SPEARMINT	5.5 - 7.5
SPINACH	6.0 - 7.5
SWEDE	5.0 - 7.0
THYME	5.5 - 7.0
TOMATO	5.5 - 7.5
TURNIP	5.5 - 7.0
WATER CRESS	6.0 - 8.0
PLANTAS DE INVERNADERO Y PARA EL HOGAR	
ABUTILON	5.5 - 6.5
ACORUS	5.0 - 6.5
AECHMEA	5.0 - 5.5
AFRICAN VIOLET	6.0 - 7.0
AGLAONEMA	5.0 - 6.0
AMARYLIS	5.5 - 6.5
ANTHURIUM	5.0 - 6.0
APHELANDRA	5.0 - 6.0
ARAUCARIA	5.0 - 6.0
ASPARAGUS FERN	6.0 - 8.0
ASPIDISTRA	4.0 - 5.5
AZAELA	4.5 - 6.0
BABY'S BREATH	6.0 - 7.5
BABY'S TEARS	5.0 - 6.0
BEGONIA	5.5 - 7.0
BIRD OF PARADISE	6.0 - 6.5
BISHOP'S CAP	5.0 - 6.0
BLACK-EYED SUSAN	5.5 - 7.5
BLOOD LEAF	5.5 - 6.5
BOTTLEBRUSH	6.0 - 7.5
BOUGAINVILLEA	5.5 - 7.5
BOXWOOD	6.0 - 7.5
BROMELIADS	5. 0 - 7.5
BUTTERFLY FLOWER	6.0 - 7.5
CACTI	4.5 - 6.0
CALCAOLARIA	6.0 - 7.0
CALADIUM	5.0 - 6.0
CALLA LILY	6.0 - 7.0
CAMELIA	4.5 - 5.5
CAMPANULA	5.5 - 6.5
CAPSICUM	5.0 - 6.5
CARDINAL FLOWER	5.0 - 6.0
CASTOR OIL PLANT	5.5 - 6.5
CANTURY PLANT	5.0 - 6.5
CHINESE EVERGREEN	5.0 - 6.0
CHINESE PRIMROSE	6.0 - 7.5
CHRISTMAS CACTUS	5.0 - 6.5
CINERARIA	5.5 - 7.0
CLERODENDRUM	5.0 - 6.0
CLIVIA	5.5 - 6.5
COCKSCOMB	6.0 - 7.0
COFFEE PLANT	5.0 - 6.0
COLEUS	6.0 - 7.0
COLUMNEA	4.5 - 5.5
CORAL BERRY	5.5 - 7.5
CRASSULA	5.0 - 6.0
CREEPING FIG	5.0 - 6.0
CROTON	5.0 - 6.0
CROWN OF THORNS	6.0 - 7.5
CUPHEA	6.0 - 7.5
CYCLAMEN	6.0 - 7.0
CYPERUS	5.0 - 7.5
DIEFFENBACHIA	5.0 - 6.0
DIPLADENIA	6.0 - 7.5
DIZGOTHECA	6.0 - 7.5
DRACAENA	5.0 - 6.0
EASTER LILY	6.0 - 7.0
ELEPHANT'S EAR	5.0 - 6.0
EPISCIA	6.0 - 7.0
EUONYMOUS	6.0 - 8.0
FERNS:	
BIRD'S NEST	5.0 - 5.5
BOSTON	5.5 - 6.5
BUTTON	6.0 - 8.0
CHRISTMAS	6.0 - 7.5
CLOAK	6.0 - 7.5
FEATHER	5.5 - 6.5
HART'S TONGUE	7.0 - 8.0
HOLLY	4.5 - 6.0
MAIDENHAIR	6.0 - 8.0
RABBITS FOOT	6.0 - 7.5
SPLEENWORT	6.0 - 7.5
FIG	5.0 - 6.0
FITTONIA	5.5 - 6.5
FREESIA	6.0 - 7.5
GARDENIA	5.0 - 6.0

NOMBRE	pH
PLANTAS DE INVERNADERO Y PARA EL HOGAR	
GENISTA	6.5 - 7.5
GERANIUM	6.0 - 8.0
GLOXINIA	5.5 - 6.5
GRAPE IVY	5.0 - 6.5
GRAPE HYACINTH	6.0 - 7.5
GREVILLEA	5.5 - 6.5
GYNURA	5.5 - 6.5
HEDERA (IVY)	6.0 - 8.0
HELIOTROPIUM	5.0 - 6.0
HENS AND CHICKENS	6.0 - 7.0
HERRINGBONE PLANT	6.0 - 6.0
HIBISCUS PLANT	6.0 - 8.0
HOYA	5.0 - 6.5
IMPATIENS	5.5 - 6.5
IVY TREE	6.0 - 7.0
JACARANDA	6.0 - 7.5
JAPANESE SEDGE	6.0 - 8.0
JASMINUM	5.5 - 7.0
JERUSALEM CHERRY	5.5 - 6.5
JESSAMONE	5.0 - 6.0
KALANCHOE	6.0 - 7.5
KANGAROO THORN	6.0 - 8.0
KANGAROO VINE	5.0 - 6.5
LANTANA	5.5 - 7.0
LAURUS (BAY TREE)	5.0 - 6.0
LEMON PLANT	6.0 - 7.5
MIMOSA	5.0 - 7.0
MIND YOUR OWN BUSINESS	5.0 - 5.5
MONSTERA	5.0 - 6.0
MYRTLE	6.0 - 8.0
NEVER NEVER PLANT	5.0 - 6.0
NICODEMIA (INDOOR OAK)	6.0 - 8.0
NORFOLK ISLAND PINE	5.0 - 6.0
OLEANDER	6.0 - 7.5
OPLISMENUS	5.0 - 6.0
ORCHID	4.5 - 5.5
OXALIS	6.0 - 8.0
PALMS	6.0 - 7.5
PANDANUS	5.0 - 6.0
PEACOCK PLANT	5.0 - 6.0
PELLIONIA	5.0 - 6.0
PEPEROMIA	5.0 - 6.0
PHILODENDRON	5.0 - 6.0
PILEA	6.0 - 8.0
PLUMBAGO	5.5 - 6.5
PODACARPUS	5.0 - 6.5
POINTSETTIA	6.0 - 7.5
POLYSCIAS	6.0 - 7.5
POTHOS	5.0 - 6.0
PRAYER PLANT	5.0 - 6.0
PUNICA	5.5 - 6.5
SANSERIERIA	4.5 - 7.0
SAXIFRAGA	6.0 - 8.0
SCINDAPSUS	5.0 - 6.0
SHRIMP PLANT	6.0 - 7.0
SPANISH BAYONET	6.0 - 7.5
SPIDER PLANT	6.0 - 7.5
SUCCULENTS	5.0 - 6.5
SYNOGONIUM	5.0 - 6.0
TOLMIEA	5.0 - 6.0
TRADESCANTIA	5.0 - 6.0
UMBRELLA TREE	5.0 - 7.5
VENUS FLYTRAP	4.0 - 5.0
WEEPING FIG	5.0 - 6.0
YUCCA	6.0 - 7.5
ZEBRINA	5.0 - 6.0
FLORES, ARBOLES Y ARBUSTOS	
ABELIA	6.0 - 8.0
ACACIA	6.0 - 8.0
ACANTHUS	6.0 - 7.0
ACONITUM	5.0 - 6.0
ADONIS	6.0 - 8.0
AGERATUM	6.0 - 7.5
AILANTHUS	6.0 - 7.5
AJUGA	4.0 - 6.0
ALTHEA	6.0 - 7.5
ALYSSUM	6.0 - 7.5
AMARANTHUS	6.0 - 6.5
ANCHUSA	6.0 - 7.5
ANDROSACE	5.0 - 6.0
ANEMONE	6.0 - 7.5
ANTHYLLIS	5.0 - 6.0
ARBUTUS	4.0 - 6.0
ARENARIA	6.0 - 8.0
ARISTEA	6.0 - 7.5
ARMERIA	6.0 - 7.5
ARNICA	5.0 - 6.5

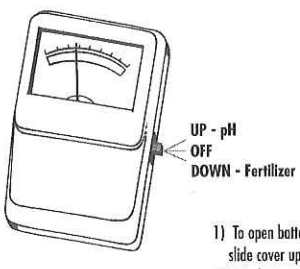
NOMBRE	pH
FLORES, ARBOLES Y ARBUSTOS	
ASPERULA	6.0 - 8.0
ASPHODOLINE	6.0 - 8.0
ASTER	5.5 - 7.5
AUBRITA	6.0 - 7.5
AZALEA	4.5 - 6.0
BALLOON FLOWER	6.0 - 6.5
BAYBERRY	4.0 - 6.0
BERGENIA	6.0 - 7.5
BLEEDING HEART	6.0 - 7.5
BLUEBELL	6.0 - 7.6
BROOM	5.0 - 6.0
BUDDLEIA	6.0 - 7.0
BUPHTHALUM	6.0 - 8.0
BUTTERFLY BUSH	4.0 - 6.0
CALENDULA	5.5 - 7.0
CAMASSIA	6.0 - 8.0
CANDYTUFT	6.0 - 7.5
CANNA	6.0 - 8.0
CANTERBURY BELLS	7.0 - 7.5
CARDINAL FLOWER	4.0 - 6.0
CARNATION	6.0 - 7.5
CATALPA	6.0 - 8.0
CELOSIA	6.0 - 7.0
CENTAUREA	5.0 - 6.5
CERASTIUM	6.0 - 7.0
CHRYSANTHEMUM	6.0 - 7.0
CISSUS	6.0 - 7.5
CISTUS	6.0 - 7.5
CLARKIA	6.0 - 6.5
CLIANTHUS	6.0 - 7.5
CLEMATIS	5.5 - 7.0
COLCHICUM	5.5 - 6.5
COLUMBINE	6.0 - 7.0
CONVOLVULUS	6.0 - 8.0
COREOPSIS	5.0 - 6.0
CORONILLA	6.5 - 7.5
CORYDALIS	6.0 - 8.0
COSMOS	5.0 - 8.0
COTTONEASTER	6.0 - 8.0
CRAB APPLE	6.0 - 7.5
CROCUS	6.0 - 8.0
CYNOGLOSSUM	6.0 - 7.5
DAFFODIL	6.0 - 6.5
DAHLIA	6.0 - 7.5
DAY LILY	6.0 - 8.0
DELPHINIUM	6.0 - 7.5
DEUTZIA	6.0 - 7.5
DIANTHUS	6.0 - 7.5
DOGWOOD	5.0 - 7.0
EDELWEISS	6.5 - 7.5
ELAEAGNUS	5.0 - 7.5
ENKIANTHUS	5.0 - 6.0
ERICA	4.5 - 6.0
EUPHORBIA	6.0 - 7.0
EVERLASTINGS	5.0 - 6.0
FIRETHORN	6.0 - 8.0
FORGET-ME-NOTS	6.0 - 7.0
FORSYTHIA	6.0 - 8.0
FOXGLOVE	6.0 - 7.5
FRITILLARIA	6.0 - 7.5
FUCHSIA	5.5 - 7.5
GAILLARDIA	6.0 - 7.5
GAZANIA	5.5 - 7.0
GENTIANA	5.0 - 7.5
GEUM	6.0 - 7.5
GLADIOILI	6.0 - 7.0
GLOBULARIA	5.5 - 7.0
GODETIA	6.0 - 7.5
GOLDEN ROD	5.0 - 7.0
GYPSOPHILIA	6.0 - 7.5
HAWTHORN	6.0 - 7.0
HEATHER	4.0 - 6.0
HELIANTHUS	5.0 - 7.0
HELLEBORUS	6.0 - 7.5
HOLLY	5.0 - 6.5
HOLLYHOCK	6.0 - 7.5
HONEYSUCKLE	6.0 - 7.5
HYACINTH	6.5 - 7.5
HYDRANGEA (Blue)	4.0 - 5.0
HYDRANGEA (Pink)	6.0 - 7.0
HYDRANGEA (White)	6.5 - 8.0
HYPERICUM	5.5 - 7.0
IRIS	5.0 - 6.5
IVY	6.0 - 7.5
JUNIPER	5.0 - 6.5
KALMIA	4.5 - 5.0
KERRIA	6.0 - 7.0
LABURNUM	6.0 - 7.0

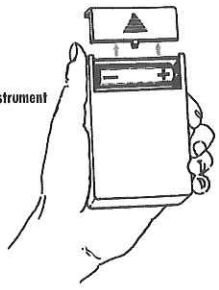
NOMBRE	pH
FLORES, ARBOLES Y ARBUSTOS	
LAUREL	6.5 - 7.5
LAVENDER	6.5 - 7.5
LIATRIS	5.5 - 7.5
LIGUSTRUM	5.0 - 7.5
LILAC	6.0 - 7.5
LILY OF THE VALLEY	4.5 - 6.0
LITHOSPERMUM	5.0 - 6.5
LOBELIA	6.5 - 7.5
LUPINUS	5.5 - 7.0
MAGNOLIA	5.0 - 6.0
MAHONIA	6.0 - 7.0
MARIGOLD	5.5 - 7.0
MOLINIA	4.0 - 5.0
MORAEA	5.5 - 6.5
MORNING GLORY	6.0 - 7.5
MOSS	6.0 - 8.0
MOSS, SPHAGNUM	3.5 - 5.0
MYOSOTIS	6.0 - 7.0
NARCISSUS	6.0 - 8.5
NASTURTIUM	5.5 - 7.5
NICOTIANA	5.5 - 6.5
PACHYSANDRA	5.0 - 8.0
PAEONIA	6.0 - 7.5
PANSY	5.5 - 7.0
PASSION FLOWER	6.0 - 8.0
PASQUE FLOWER	5.0 - 6.0
PAULOWNIA	6.0 - 8.0
PENSTEMON	5.5 0 7.0
PERIWINKLE	6.0 - 7.5
PETUNIA	6.0 - 7.5
PINKS	6.0 - 7.5
POLYGONUM	6.0 - 7.5
POLYANTHUS	6.0 - 7.5
POPPY	6.0 - 7.5
PORTULACA	5.5 - 7.5
PRIMROSE	5.5 - 6.5
PRIMULA	6.0 - 7.5
PRIVET	5.0 - 7.5
PRUNELLA	6.0 - 7.5
PRUNUS	6.5 - 7.5
PYRETHRUM	6.0 - 7.5
RED HOT POKER	6.0 - 7.5
RHODODENDREN	4.5 - 6.0
ROSES:	
HYBRID TEA	5.5 - 7.0
CLIMBING	6.0 - 7.0
RAMBLING	5.5 - 7.0
SALVIA	6.0 - 7.5
SCABIOSA	5.0 - 7.5
SEDUM	6.0 - 7.5
SNAPDRAGON	5.5 - 7.0
SNOWDROP	6.0 - 8.0
SOAPWORT	6. 0 7.5
SPEEDWELL	5.5 - 6.5
SPIRAEA	6.0 - 7.5
SPRUCE	4.0 - 5.0
STOCK	6.0 - 7.5
STONECROP	6.5 - 7.5
SUMACK	5.0 - 6.5
SUNFLOWER	5.0 - 7.0
SWEET PEA	6.0 - 7.5
SWEET WILLIAM	6.0 - 7.5
TAMARIX	6.5 - 8.0
TRILLIUM	5.0 - 6.5
TULIP	6.0 - 7.0
VIBERNUM	5.0 - 7.5
VIOLA	5.5 - 6.5
VIRGINIA CREEPER	5.0 - 7.5
WALLFLOWER	5.5 - 7.5
WATER LILY	5.5 - 6.5
WEIGELIA	6.0 - 7.5
WISTARIA	6.0 - 8.0
ZINNIA	5.5 - 7.5
PASTO Y CESPED ORNAMENTAL	
BAHAI	6.5 - 7.5
BENT	5.5 - 6.5
BERMUDA	6.0 - 7.0
CANADA BLUE	4.5 - 6.4
CLOVER	6.0 - 7.0
KENTUCKY BLUE	6.0 - 7.5
MEADOW	6.0 - 7.5
PAMPAS	6.0 - 8.0
RED TOP	6.0 - 6.5
RYE	6.0 - 7.0
ST. AUGUSTINE	6.5 - 7.5
TALL FESCUE	6.0 - 7.0
VELVET BENT	5.0 - 6.0
ZOYSIA	6.0 - 7.0

GARDENING TIPS:

- Altering the pH takes time. Do not expect instant changes but work steadily, towards the ideal range. Most plants have a "range" of pH. Consult your "tables" for the pH range of your plants.
- Adding lime before planting is most beneficial because it takes time to take effect. Liming in the fall, winter or early spring is preferred.
- Avoid adding lime at the same time as fertilizers whether they are organic or chemical.
- When testing a lawn, water thoroughly and push the probes into the soil up to the plastic case base.
- Use lime sparingly. It encourages weeds and worms. Worms then attract moles.
- Save clippings, vegetable & fruit wastes for compost
- Bone meal is an excellent fertilizer to be used at the time of planting.

"METER PARTS" AND BATTERY REPLACEMENT





1) To open battery compartment slide cover upwards with thumb.
2) Note battery position
3) Replace with 1.5 volt AA battery
4) Replace cover, snap in securely

Norma.Hernandez

From: Norma.Hernandez
Sent: Tuesday, May 05, 2015 4:25 PM
To: Johnson, Chris (ECY) (chjo461@ECY.WA.GOV)
Cc: DavieDa@wsdot.wa.gov; Dustin.Donahoo
Subject: Treament of Low pH Stormwater
Attachments: Product Data=Wil-Gro Pelletized Lime.pdf; Product Data=Aggrand Liquid Lime.pdf

Hi Chris,

As per our phone conversation on Monday April 20th, 2015, I have noticed that the pH for the stormwater from our facility's bioswales has been trending down to 6.5 pH over the last year. I took a sample of rainwater on April 14, 2015 and found the pH to be 5.77. You later were able to confirm that resource agencies have detected lower pH for rainwater in the Northwest region, between 5.5 and 6.0 pH.

Per our phone conversation, Kiewit-General will treat the stormwater if necessary in order to ensure that it remains between 6.5 and 8.5 pH when discharging at the site's designated outfalls, as required by our NPDES Sand and Gravel General permit. One possible method Kiewit-General may implement to increase the pH above 6.5 is the use of Lime to amend the soil in the bioswales, which in turn should increase the pH of the water that is collected in the bioswales. Attached are a couple of products that we are considering for use at this facility, as examples. The products will be used as per the manufacture's recommendations.

This information will be added as an appendix to this site's Water Quality Monitoring Plan. Please let me know if you have any questions.

Thank you very much for discussing this with me. I really appreciated the feedback you provided.

Sincerely,

Norma Hernandez
Environmental Compliance Manager
SR520 Pontoons Project
Kiewit-General, A Joint Venture
Office: (360) 500-4389 / Cell: (602) 516-3817

WIL-GRO®
PROFESSIONAL FERTILIZER

PELLETIZED LIME

GUARANTEED ANALYSIS

Calcium Carbonate ($CaCO_3$)	86.00%
Calcium Carbonate Equivalent (CCE)	90.26%
Oregon Limescore	89.00

SIEVE ANALYSIS (before granulating)

10 mesh	100.00%
20 mesh	100.00%
40 mesh	99.00%
60 mesh	93.00%
100 mesh	89.00%

DERIVED FROM: Ground Limestone.

FIRST AID

In all cases, call a poison control center or doctor for further treatment advice.

IF SWALLOWED, call a poison control center or doctor immediately. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything to an unconscious person. **IF ON SKIN,** take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. **IF INHALED,** move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration. **IF IN EYES,** hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage, disposal or cleaning of equipment.

Store in a safe manner. Store in original container only and keep tightly sealed when not in use. Dispose of unused product and empty containers in accordance with Federal, State and local regulations.

DIRECTIONS FOR USE

APPLICATION RATES	POUNDS PER ACRE	POUNDS PER 1,000 SQ. FT.	POUNDS PER 100 SQ. FT.
High	2,175	50.0	5.0
Medium	1,089	25.0	2.5
Low	545	12.5	1.3

ADVANTAGES AND BENEFITS

- WIL-GRO® PELLETIZED LIME has easy-to-apply granules and is high in calcium.
- Helps to reduce aluminum toxicity and increase fertilizer availability to plants.
- Promotes healthy plant growth.
- Sweetens (raises soil pH) and helps to structure soils.
- Needed on acid soils.
- For lawns, gardens, farms, golf courses, institutional turf, etc.

KEEP OUT OF REACH OF CHILDREN

PRECAUTION

Do not ingest. Avoid contact with skin, eyes or clothing. Avoid breathing dust, vapor or mist.

For chemical spills, leaks, fire or exposure, call CHEMTREC: (800) 424-9300.

NET WEIGHT: 50 POUNDS (22.68 kg)

Manufactured by: Wilbur-Ellis Company, 7 E. Washington Ave., Yakima, WA 98903 K-121012

Conditions of Sale and Limitation of Warranty and Liability:

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using the product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of the product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of many different factors including, without limitation, manner of use or application, weather, combination with other products, or crop conditions. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Manufacturer and Seller harmless from any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label. EXCEPT FOR THIS WARRANTY, THE PRODUCT IS FURNISHED "AS-IS," AND NEITHER SELLER NOR MANUFACTURER MAKES ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE SELECTION, PURCHASE OR USE OF THIS PRODUCT; SELLER AND MANUFACTURER SPECIFICALLY DISCLAIM ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Buyer and User accept all risks arising from any use of this product, including without limitation uses contrary to label instructions, under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) Seller or Manufacturer.

To the extent permitted by law, neither Manufacturer nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE BUYER OR USER, AND THE EXCLUSIVE LIABILITY OF MANUFACTURER AND SELLER, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THIS PRODUCT, OR, AT THE ELECTION OF MANUFACTURER OR SELLER, THE REPLACEMENT OF THE PRODUCT.

These Conditions of Sale and Limitation of Warranty and Liability shall be interpreted in accordance with the laws of the State of California, excluding its conflicts of laws rules, and may not be amended by any oral or written agreement.

Information regarding the contents and levels of metals in this product is available on the internet at http://www.aapfco.org/metals.htm

WILBUR-ELLIS®

AGGRAND Liquid Lime is fine calcitic limestone in suspension.

Directions: Some product settling will occur, agitate well before and during use. Once product is diluted use within 48 hrs. May stain porous materials. Do not apply on alkaline soils (pH above 7.0). Application recommendations on this label are general guidelines. For additional application information vist us at www.aggrand.com. Soil testing is recommended. Do not freeze. Keep out of reach of children.

Lawn and Turf Rates: Apply using a convenient hose end sprayer available from AMSOIL INC. (G1102), or mix 32 oz. AGGRAND Liquid Lime with a minimum of 10 gal. water. For soil pH below 6.0 broadcast mixture over 1,000 sq. ft. every 3 to 4 weeks. For soil pH 6.0-7.0 broadcast mixture over 5,000 sq. ft. once in spring and fall.

Garden and Field Application Rates: Apply using a convenient hose end sprayer available from AMSOIL INC. (G1102), or mix 32 oz. AGGRAND Liquid Lime with a minimum of 10 gal. water. Broadcast mixture over 1,000 sq. ft., or band in 200 ft. rows during planting.

Houseplants: Mix 3 oz. AGGRAND Liquid Lime with 1 gal. water. Add 1 to 2 cups of mixture for every gallon of soil once in spring and fall. Do not apply to plants that require acidic soil (pH below 6.0).

Information regarding the contents and levels of metals in this product is available on the internet at http://www.aapfco.org/metals.htm

CONDITIONS BEYOND OUR CONTROL MAY AFFECT RESULTS. AMSOIL INC. DOES NOT WARRANTY OR GUARANTEE ANY PARTICULAR LEVEL OF PERFORMANCE OR RESULTS. TO THE FULLEST EXTENT PERMITTED BY LAW, AMSOIL INC. LIMITS, EXCLUDES, AND DISCLAIMS LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS PRODUCT. BUYER ACCEPTS THESE CONDITIONS WITH USE OF THIS PRODUCT. WARRANTY IS LIMITED TO REPLACEMENT OF PRODUCT THAT IS DETERMINED TO BE DEFECTIVE IN MANUFACTURING OR PACKAGING.

AMSOIL INC • AMSOIL Building • Superior, WI 54880 U.S.A.
Visit us on the web at www.aggrand.com

GUARANTEED ANALYSIS

Calcium (Ca)	10.0%
Calcium Carbonate ($CaCO_3$)	25.0%
Calcium Oxide (CaO)	14.5%
Calcium Carbonate Equivalent (CCE)	25.0%
Effective Calcium Carbonate Equivalent (ECCE)	25.0%
Relative Neutralizing Value (RNV)	25.0%
Total Neutralizing Value (TNV)	25.0%
Oregon Lime Score	7.0
Solids	30.0%
Moisture content does not exceed	70.0%

Derived from: Calcitic Limestone
7,200 Lbs. Liquid Lime = 1 ton Std. Ag. Liming Material

Percent Passing 10 Mesh Sieve	100%
Percent Passing 20 Mesh Sieve	100%
Percent Passing 40 Mesh Sieve	100%
Percent Passing 60 Mesh Sieve	100%
Percent Passing 80 Mesh Sieve	100%
Percent Passing 100 Mesh Sieve	100%
Percent Passing 325 Mesh Sieve	95%

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PRODUCT CODE NLL-QT